Amendments to the Specification:

Please replace the section beginning at page 6, line 10, with the following redlined section:

The above objects of the present invention can be accomplished by a method for determining a power of a laser beam which is adapted for determining a recording power of the laser beam to be projected onto a data rewritable type optical recording medium for recording data therein, the method for determining a power of a laser beam comprising steps of projecting the laser beam onto a first track, a second track and a third track in this order formed on the data rewritable type optical recording medium to be adjacent with each other while varying a level of the recording power of the laser beam, thereby recording a first test signal, reproducing the first test signal recorded on the second track, measuring, for each of the levels of the recording power of the laser beam, jitter JJ1 of the thus reproduced signal, reproducing the first test signal recorded on the third track, measuring jitter JJ0 of the thus reproduced signal, projecting the laser beam onto the first track and the third track y times where y is a positive integer, thereby directly overwriting the first test signal recorded on the first track and the first test signal recorded on the third track with the first test signal, reproducing the first test signal recorded on the second track, measuring jitter $JJ(n + 1)$ of the thus reproduced signal where n is an integer equal to or larger than 0 and equal to or smaller than y, obtaining, for each of the levels of the recording power of the laser beam, a value of nc of n at which a function of a difference between $JJ(n + 1)$ and $JJ0$ becomes constant, determining the maximum value of nc as the number of times x of the direct overwriting required for saturating an influence of cross erasing of data on the first test signal recorded on the second track by directly overwriting the first test signal recorded on the first track and the first test signal recorded on the third track with the first test signal, setting the recording power of the laser beam to a predetermined level, projecting the laser beam onto a fourth track, a fifth track and a sixth track in this order formed on the data rewritable type optical recording medium to be adjacent with each other, thereby recording a second test signal thereon, reproducing the second test signal recorded on the fifth track, measuring an amplitude A1 and jitter J1 of the thus reproduced signal, reproducing the second test signal recorded on the sixth track, measuring an amplitude A0 of the thus reproduced signal, calculating, for each of the

levels of the recording power of the laser beam, a first parameter as a function of a difference between the amplitude A0 of the reproduced signal obtained from the sixth track and the amplitude A1 of the reproduced signal obtained from the fifth track, directly overwriting the second test signal recorded on the fourth track and the second test signal recorded on the sixth track with the second test signal x times, reproducing the second test signal recorded on the fifth track, measuring an amplitude ~~As~~ $A(x + 1)$ and jitter ~~Js~~ $J(x + 1)$ of the thus reproduced signal, calculating, for each of the levels of the recording power of the laser beam, a second parameter as a function of a difference between the amplitude A1 of the reproduced signal and the amplitude ~~As~~ $A(x + 1)$ of the reproduced signal, calculating a third parameter as a function of a difference between the jitter ~~Js~~ $J(x + 1)$ of the reproduced signal and the jitter J1 of the reproduced signal, obtaining a value of the first parameter corresponding to a value of the second parameter when the third parameter is equal to a tolerance, thereby determining a critical parameter, recording a third test signal in the data rewritable type optical recording medium while varying levels of the recording power of the laser beam, measuring, when signal characteristics of a reproduced signal obtained by reproducing the third signal recorded in the data rewritable type optical recording medium satisfy reference conditions, an amplitude ~~AA0~~ $D3$ of a reproduced signal obtained by reproducing the third test signal before the third test signal is influenced by cross erasing of data and an amplitude ~~AA1~~ $D2$ of a reproduced signal obtained by reproducing the third test signal after the third test signal was once influenced by cross erasing of data for each of the levels of the recording power of the laser beam, calculating, based on the amplitude ~~AA1~~ $D2$ of the reproduced signal and the amplitude ~~AA0~~ $D3$ of the reproduced signal obtained by reproducing the third test signals, a fourth parameter as a function of a difference between the amplitude ~~AA0~~ $D3$ of the reproduced signal obtained by reproducing the third test signal before the third test signal is influenced by cross erasing of data and the amplitude ~~AA1~~ $D2$ of he reproduced signal obtained by reproducing the third test signal after the third test signal was once influenced by cross erasing of data, comparing the critical parameter and the fourth parameter, and determining the recording power of the laser beam at which the fourth parameter was obtained as an optical recording power when the fourth parameter is equal to or smaller than the critical parameter.

3

According to the present invention, it is possible to determine an optimum recording power of the laser beam so that jitter of a reproduced signal obtained by reproducing data recorded in a data rewritable type optical recording medium can be controlled within a tolerance even when cross erasing of data occurs and that that the reproduced signal having the highest level can be obtained only by measuring, when the signal characteristics of the reproduced signal obtained by recording ~~recording~~ the third test signal in the data rewritable type optical recording medium while varying levels of the recording power of the laser beam and reproducing the third test signal recorded in the data rewritable type optical recording medium satisfy the reference conditions, an amplitude ~~AA0~~ D3 of the reproduced signal obtained by reproducing the third test signal before the third test signal is influenced by cross erasing of data and an amplitude ~~AA1~~ D2 of the reproduced signal obtained by reproducing the third test signal after the first test signal was once influenced by cross erasing of data for each of the levels of the recording power of the laser beam, calculating a fourth parameter based on the amplitudes ~~AA0~~ D3 and ~~AA1~~ D2 of the reproduced signals obtained by reproducing the test signal as a function of the difference between the amplitude ~~AA0~~ D3 of the reproduced signal obtained by reproducing the third test signal before the third test signal is influenced by cross erasing of data and the amplitude ~~AA1~~ D2 of the reproduced signal obtained by reproducing the third test signal after the first test signal was once influenced by cross erasing of data, and comparing the thus calculated fourth parameter with a critical parameter determined in advance.

Please replace the section beginning at page 11, line 3, with the following redlined paragraph (or section):

In a preferred aspect of the present invention, the method for determining a power of a laser beam comprises steps of setting the recording power of the laser beam to a predetermined level, sequentially projecting the laser beam onto a seventh track, ~~and~~ an eighth track, and a ninth track formed on the data rewritable type optical recording medium to be adjacent with each other in this order, thereby recording a third test signal thereon, reproducing the third test signal recorded on the ~~seventh~~ eighth track, judging whether or not signal characteristics of the thus obtained reproduced signal satisfy reference conditions, changing, when the signal characteristics of the reproduced signal do not satisfy the reference conditions,

the level of the recording power of the laser beam and recording the third test signal onto the ~~seventh~~ __eighth__ track and the ~~eighth~~ __ninth__ track in this order formed on the data rewritable type optical recording medium to be adjacent with each other until signal characteristics of a reproduced signal obtained by reproducing the third test signal recorded on the ~~seventh~~ __eighth__ track satisfy the reference conditions, reproducing the third test signal recorded on the ~~seventh~~ __eighth__ track and measuring an amplitude of the thus obtained reproduced signal, thereby obtaining the amplitude ~~AA1~~ __D2__, reproducing the third test signal recorded on the ~~eighth~~ __ninth__ track and measuring an amplitude of the thus obtained reproduced signal, thereby obtaining the amplitude ~~AA0~~ __D3__, and determining the fourth parameter as a function of a difference between the amplitude ~~AA0~~ __D3__ of the reproduced signal obtained from the ~~eighth~~ __ninth__ track and the amplitude ~~AA1~~ __D2__ of the reproduced signal obtained from the ~~sixth~~ __eighth__ track.

The above and other objects of the present invention can be also accomplished by a method for determining a critical parameter used for determining a recording power of a laser beam to be projected onto a data rewritable type optical recording medium for recording data therein, the method for determining a critical parameter used for determining the recording power of the laser beam comprising steps of setting the recording power of the laser beam to a predetermined level, sequentially projecting the laser beam onto a first track, a second track and a third track formed on the data rewritable type optical recording medium to be adjacent with each other in this order, thereby recording a first test signal thereon, reproducing the first test signal recorded on the second track, measuring an amplitude A1 and jitter J1 of the thus obtained reproduced signal, reproducing the first test signal recorded on the third track, measuring an amplitude A1 of the thus obtained reproduced signal, calculating a first parameter as a function of a difference between the amplitude A0 of the reproduced signal obtained from the third track and the amplitude A1 of the reproduced signal obtained from the second track, directly overwriting the first test signal recorded on the first track and the first test signal recorded on the third track with the first test signal predetermined times equal to a predetermined number of times x until an influence of cross erasing of data on the first test signal recorded on the second track has become saturated, reproducing the first test signal recorded on the second track, measuring an amplitude ~~As~~ __A(x + 1)__ and jitter ~~Js~~ __J(x + 1)__ of the thus obtained reproduced signal,

calculating a second parameter as a function of a difference between the amplitude A1 of the reproduced signal and the amplitude ~~As~~ $\underline{A(x + 1)}$ of the reproduced signal, calculating a third parameter as a function of a difference between the jitter ~~Js~~ $\underline{J(x + 1)}$ of the reproduced signal and the jitter J1 of the reproduced signal, repeatedly performing the above identified steps while varying levels of the recording power of the laser beam by α within a predetermined range, calculating the first parameter, the second parameter and the third parameter for each of the levels of the recording power of the laser beam, obtaining a value of the first parameter corresponding to a value of the second parameter when the third parameter is equal to a tolerance, and determining the thus obtained value of the first parameter as a critical parameter.

Please replace the section beginning at page 13, line 26, with the following redlined section:

The above and other objects of the present invention can be also accomplished by a data rewritable type optical recording medium recorded with a critical parameter used for determining a recording power of a laser beam, the critical parameter being determined by setting the recording power of the laser beam to a predetermined level, projecting the laser beam onto a first track, a second track and a third track in this order formed on the data rewritable type optical recording medium to be adjacent with each other, thereby recording a first test signal, reproducing the first test signal recorded on the second track, measuring jitter JJ1 of the thus reproduced signal, reproducing the first test signal recorded on the third track, measuring jitter JJ0 of the thus reproduced signal, projecting the laser beam onto the first track and the third track y times where y is a positive integer, thereby directly overwriting the first test signal recorded on the first track and the first test signal recorded on the third track with the first test signal, reproducing the first test signal recorded on the second track, measuring jitter $JJ(n + 1)$ of the thus reproduced signal where n is an integer equal to or larger than 0 and equal to or smaller than y, obtaining, for each of the levels of the recording power of the laser beam, a value of nc of n at which a function of a difference between $JJ(n + 1)$ and JJ0 becomes constant, determining the maximum value of nc as the number of times x of the direct overwriting required for saturating an influence of cross erasing of data on the first test signal recorded on the second track by directly overwriting the first test signal recorded on the first track and the first test signal

6

recorded on the third track with the first test signal, setting the recording power of the laser beam to a predetermined level, projecting the laser beam onto a fourth track, a fifth track and a sixth track in this order formed on the data rewritable type optical recording medium to be adjacent with each other, thereby recording a second test signal thereon, reproducing the second test signal recorded on the fifth track, measuring an amplitude A1 and jitter J1 of the thus reproduced signal, reproducing the second test signal recorded on the sixth track, measuring an amplitude A0 of the thus reproduced signal, calculating, for each of the levels of the recording power of the laser beam, a first parameter as a function of a difference between the amplitude A0 of the reproduced signal obtained from the sixth track and the amplitude A1 of the reproduced signal obtained from the fifth track, directly overwriting the second test signal recorded on the fourth track and the second test signal recorded on the sixth track with the second test signal x times, reproducing the second test signal recorded on the fifth track, measuring an amplitude $\text{A\hspace{-0.5em}/\hspace{-0.5em}s}\,\underline{A(x + 1)}$ and jitter $\text{J\hspace{-0.5em}/\hspace{-0.5em}s}\,\underline{J(x + 1)}$ of the thus reproduced signal, calculating, for each of the levels of the recording power of the laser beam, a second parameter as a function of a difference between the amplitude A1 of the reproduced signal and the amplitude $\text{A\hspace{-0.5em}/\hspace{-0.5em}s}\,\underline{A(x + 1)}$ of the reproduced signal, calculating a third parameter as a function of a difference between the jitter $\text{J\hspace{-0.5em}/\hspace{-0.5em}s}\,\underline{J(x + 1)}$ of the reproduced signal and the jitter J1 of the reproduced signal, and obtaining a value of the first parameter corresponding to a value of the second parameter when the third parameter is equal to a tolerance.

The above and other objects of the present invention can be also accomplished by a data recording apparatus storing a critical parameter used for determining a recording power of a laser beam so as to be associated with ID data for identifying a kind of an optical recording medium, the critical parameter being determined by setting the recording power of the laser beam to a predetermined level, sequentially projecting the laser beam onto a first track, a second track and a third track in this order formed on the data rewritable type optical recording medium to be adjacent with each other, thereby recording a first test signal thereon, reproducing the first test signal recorded on the second track, measuring jitter JJ1 of the thus reproduced signal, reproducing the first test signal recorded on the third track, measuring jitter JJ0 of the thus reproduced signal, projecting the laser beam onto the first track and the third track y times where

y is a positive integer, thereby directly overwriting the first test signal recorded on the first track and the first test signal recorded on the third track with the first test signal, reproducing the first test signal recorded on the second track, measuring jitter $JJ(n + 1)$ of the thus reproduced signal where n is an integer equal to or larger than 0 and equal to or smaller than y, obtaining, for each of the levels of the recording power of the laser beam, a value of nc of n at which a function of a difference between $JJ(n + 1)$ and $JJ0$ becomes constant, determining the maximum value of nc as the number of times x of the direct overwriting required for saturating an influence of cross erasing of data on the first test signal recorded on the second track by directly overwriting the first test signal recorded on the first track and the first test signal recorded on the third track with the first test signal, setting the recording power of the laser beam to a predetermined level, projecting the laser beam onto a fourth track, a fifth track and a sixth track in this order formed on the data rewritable type optical recording medium to be adjacent with each other, thereby recording a second test signal thereon, reproducing the second test signal recorded on the fifth track, measuring an amplitude $A1$ and jitter $J1$ of the thus reproduced signal, reproducing the second test signal recorded on the sixth track, measuring an amplitude $A0$ of the thus reproduced signal, calculating, for each of the levels of the recording power of the laser beam, a first parameter as a function of a difference between the amplitude $A0$ of the reproduced signal obtained from the sixth track and the amplitude $A1$ of the reproduced signal obtained from the fifth track, directly overwriting the second test signal recorded on the fourth track and the second test signal recorded on the sixth track with the second test signal x times, reproducing the second test signal recorded on the fifth track, measuring an amplitude ~~As~~ $A(x + 1)$ and jitter ~~Js~~ $J(x + 1)$ of the thus reproduced signal, calculating, for each of the levels of the recording power of the laser beam, a second parameter as a function of a difference between the amplitude $A1$ of the reproduced signal and the amplitude ~~As~~ $A(x + 1)$ of the reproduced signal, calculating a third parameter as a function of a difference between the jitter ~~Js~~ $J(x + 1)$ of the reproduced signal and the jitter $J1$ of the reproduced signal, and obtaining a value of the first parameter corresponding to a value of the second parameter when the third parameter is equal to a tolerance.

The above and other objects of the present invention can be also accomplished by a data recording apparatus storing an optimum recording power of a laser beam so as to be

associated with ID data for identifying a kind of an optical recording medium, the optimum recording power of the laser beam being determined by setting the recording power of the laser beam to a predetermined level, projecting the laser beam onto a first track, a second track and a third track in this order formed on the data rewritable type optical recording medium to be adjacent with each other, thereby recording a first test signal, reproducing the first test signal recorded on the second track, measuring jitter JJ1 of the thus reproduced signal, reproducing the first test signal recorded on the third track, measuring jitter JJ0 of the thus reproduced signal, projecting the laser beam onto the first track and the third track y times where y is a positive integer, thereby directly overwriting the first test signal recorded on the first track and the first test signal recorded on the third track with the first test signal, reproducing the first test signal recorded on the second track, measuring jitter $JJ(n + 1)$ of the thus reproduced signal where n is an integer equal to or larger than 0 and equal to or smaller than y, obtaining, for each of the levels of the recording power of the laser beam, a value of nc of n at which a function of a difference between $JJ(n + 1)$ and JJ0 becomes constant, determining the maximum value of nc as the number of times x of the direct overwriting required for saturating an influence of cross erasing of data on the first test signal recorded on the second track by directly overwriting the first test signal recorded on the first track and the first test signal recorded on the third track with the first test signal, setting the recording power of the laser beam to a predetermined level, projecting the laser beam onto a fourth track, a fifth track and a sixth track in this order formed on the data rewritable type optical recording medium to be adjacent with each other, thereby recording a second test signal thereon, reproducing the second test signal recorded on the fifth track, measuring an amplitude A1 and jitter J1 of the thus reproduced signal, reproducing the second test signal recorded on the sixth track, measuring an amplitude A0 of the thus reproduced signal, calculating, for each of the levels of the recording power of the laser beam, a first parameter as a function of a difference between the amplitude A0 of the reproduced signal obtained from the sixth track and the amplitude A1 of the reproduced signal obtained from the fifth track, directly overwriting the second test signal recorded on the fourth track and the second test signal recorded on the sixth track with the second test signal x times, reproducing the second test signal recorded on the fifth track, measuring an amplitude A̶s̶ $A(x + 1)$ and jitter J̶s̶ $J(x + 1)$

9

of the thus reproduced signal, calculating, for each of the levels of the recording power of the laser beam, a second parameter as a function of a difference between the amplitude A1 of the reproduced signal and the amplitude ~~As~~ $A(x + 1)$ of the reproduced signal, calculating a third parameter as a function of a difference between the jitter ~~Js~~ $J(x + 1)$ of the reproduced signal and the jitter J1 of the reproduced signal, obtaining a value of the first parameter corresponding to a value of the second parameter when the third parameter is equal to a tolerance, thereby determining a critical parameter used for determining the recording power of the laser beam, setting the recording power of the laser beam to a predetermined level, projecting the laser beam onto a seventh track, ~~and~~ an eighth track, and a ninth track in this order formed on data rewritable type optical recording medium to be adjacent with each other, thereby recording a third signal, reproducing the third test signal recorded on the ~~seventh~~ eighth track, judging whether or not signal characteristics of the thus reproduced signal satisfy reference conditions, changing, when the signal characteristics of the reproduced signal do not satisfy the reference conditions, the level of the recording power of the laser beam and recording the third test signal onto the ~~seventh~~ eighth track and the ~~eighth~~ ninth track in this order formed on the data rewritable type optical recording medium to be adjacent with each other until signal characteristics of a reproduced signal obtained by reproducing the third test signal recorded on the ~~seventh~~ eighth track satisfy the reference conditions, reproducing the third test signal recorded on the ~~seventh~~ eighth track and measuring an amplitude of the thus obtained reproduced signal, thereby obtaining the amplitude ~~AA1~~ D2, reproducing the third test signal recorded on the ~~eighth~~ ninth track and measuring an amplitude ~~AA0~~ D3 of the thus obtained reproduced signal, determining the fourth parameter as a function of a difference between the amplitude ~~AA0~~ D3 of the reproduced signal obtained from the eighth track and the amplitude ~~AA1~~ D2 of the reproduced signal obtained from the ~~sixth~~ eighth track, comparing the critical parameter and the fourth parameter, and obtaining the recording power of the laser beam at which the fourth parameter was obtained when the fourth parameter is equal to or smaller than the critical parameter.

Please add, beginning at page 21, between lines 6 and 7, the following new paragraph (or section):

Figure 10 is a schematic plan view showing three sets of tracks consisting of three adjacent tracks in a power calibration area of an optical recording medium in which a test signal is received.

Please replace the section beginning at page 30, line 5, with the following redlined section:

Figure 4 is a schematic plan view showing the three tracks adjacent with each other in the calibration area of the optical recording medium 10 in which the a test signal was is recorded at Step S1.

In Figure 4 10C, a first seventh track is a track in which the test signal in Step S1 was first recorded, the second eighth track is a track in which the test signal was secondly recorded and the third ninth track is a track in which the test signal was last recorded. The seventh track, the eighth track, and the ninth track can be any three adjacent tracks referred to above. For convenience, the seventh track, the eighth track, and ninth track will be referred to as the first track, the second track, and the third track respectively, for this particular Figure 10C.

Please replace the paragraph beginning at page 34, line 14, with the following redlined paragraph:

Here, similarly to in Figure 4 and Figure 10C, as shown in Figure 10B, a first fourth track is a track in which the test signal was first recorded, the second fifth track is a track in which the test signal was secondly recorded and the third sixth track is a track in which the test signal was last recorded. The fourth track, the fifth track, and the sixth track can be any adjacent tracks referred to above. For convenience, the fourth track, the fifth track, and sixth track will be referred to as the first track, the second track, and the third track respectively, for this particular Figure 10B.

Please replace the paragraph beginning at page 36, line 10, with the following redlined paragraph:

Therefore, the jitter $J(x + 1)$ of the reproduced signal obtained by reproducing the test signal recorded on the second track is normally much higher than the jitter J1 and the amplitude $A(x + 1)$ of the reproduced signal obtained by reproducing the test signal recorded on the second track is normally much smaller than the amplitude A1. Here, since the test signal recorded on the first track and the test data recorded on the third track have been directly overwritten ~~nine~~ $\underline{x}$ times, the influences by cross erasing of data on the jitter $J(x + 1)$ and the amplitude $A(x + 1)$ have been saturated.

Please replace the paragraph beginning at page 36, line 19, with the following redlined paragraph:

Thus, when it is judged that the level of the recording power *Pw* of the laser beam exceeds the maximum level *Pw(max)* determined in advance (Step S32), the measurement of the jitters J0, J1 and $J(x + 1)$ and the amplitudes A0, A1 and $A(x + 1)$ of the reproduced signals obtained by reproducing the test signals recorded on the second track <u>and third track</u> using each of the recording powers *Pw* of the laser beam is completed.

Please replace the paragraph beginning at page 37, line 9, with the following redlined paragraph:

Here, the first signal amplitude reduction ratio R1 is defined as (A0 − A1) / A0, the amplitude A0 corresponds to an amplitude D3 of a reproduced signal obtained by reproducing the test signal recorded on the third track at Step S7 of the laser beam recording power determination routine shown in Figure 3 and the amplitude A1 corresponds to an amplitude ~~D3~~<u>D2</u> of a reproduced signal obtained by reproducing the test signal recorded on the ~~third~~<u>second</u> track at Step S7 of the laser beam recording power determination routine shown in Figure 3.

Please replace the section beginning at page 42, line 8, with the following redlined section:

The minimum level *Pw(min)* of the recording power *Pw* of the laser beam used in the direct overwriting number determination routine may be the same level as that of the minimum level *Pw(min)* of the recording power *Pw* of the laser beam used in the critical signal amplitude reduction ratio determination routine but since it is unnecessary in the direct overwriting number determination routine to greatly change the level of the recording power of the laser beam to record a test signal, reproduce the test signal and measure jitter of the thus reproduced signal unlike in the case of determining the critical signal amplitude reduction ratio *Rc*, it is preferable to set the minimum level *Pw(min)* of the recording power *Pw* of the laser beam used in the direct overwriting number determination routine to a higher level ~~that that~~ than the minimum level *Pw(min)* of the recording power *Pw* of the laser beam used in the critical signal amplitude reduction ratio determination routine. However, it is necessary to set the minimum level *Pw(min)* of the recording power *Pw* of the laser beam used in the direct overwriting number determination routine to a higher level that that of the recording power *Pw* of the laser beam used for recording data.

Here, similarly to in Figure 4 <u>and Figures 10B and 10C, as shown in Figure 10A,</u> the first track is a track in which the test signal was first recorded, the second track is a track in which the test signal was secondly recorded and the third track is a track in which the test signal was last recorded. <u>The first track, the second track, and the third track can be any three adjacent tracks as shown in Figure 4.</u>

Please replace the paragraph beginning at page 43, line 15, with the following redlined paragraph:

Then, the variable ~~i~~*k* is set to (~~i~~*k* + 1) (Step S46) and the test signal recorded on the first track and the test signal recorded on the third track are directly overwritten with the test signals under the same recording conditions as those used for recording the test signals at Step 43 (Step S47).

Please replace the paragraph beginning at page 44, line 24, with the following redlined paragraph:

As a result, when the variable k has become a predetermined value y, the test signal recorded on the first track and the test data recorded on the third track have been directly overwritten y times and jitter JJ(y + 1) of a reproduced signal obtained by reproducing the test signal recorded on the second track has been measured_(Step S51), the level of the recording power Pw of the laser beam is further set to (Pw + β) (Step S51 S52). Then, Steps S41 to 51 are repeated and jitter JJ0, JJ1, JJ2, ..., JJm, ... and JJ(y + 1) of reproduced signals obtained by reproducing the test signal recorded on the second track are measured.

Please replace the paragraph beginning at page 45, line 14, with the following redlined paragraph:

Thus, when it is judged that the level of the recording power Pw of the laser beam exceeds the maximum level $Pw(max)$ determined in advance (Step S52 S53), the measurement of the jitter JJ0, JJ1, JJ2, ..., JJm, ... and JJ(y + 1) of reproduced signals obtained by reproducing the test signals recorded on the second track for each levels of the recording power of the laser beam is completed.